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Security Council

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Note by the President of the Security Council

At its 6335th meeting, held on 9 June 2010 in connection with the item entitled "Non-proliferation", the Security Council adopted resolution 1929 (2010).

In paragraph 4 of the resolution, the Security Council requested the Director General of the International Atomic Energy Agency to communicate to the Council all his reports on the application of safeguards in the Islamic Republic of Iran.

Accordingly, the President herewith circulates the report of the Director General dated 16 November 2012 (see annex).

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Annex

Letter dated 16 November 2012 from the Director General of the International Atomic Energy Agency addressed to the President of the Security Council

I have the honour to enclose herewith the report requested by the Security Council in its resolution 1929 (2010), which I have submitted today to the Board of Governors of the International Atomic Energy Agency (see enclosure).

I should be grateful if you would bring the present letter and the enclosed report to the attention of all Members of the Security Council.

(*Signed*) Yukiya **Amano**

Enclosure*

Implementation of the NPT Safeguards Agreement and relevant provisions of Security Council resolutions in the Islamic Republic of Iran

Report by the Director General

A. Introduction

1. This report of the Director General to the Board of Governors and, in parallel, to the Security Council, is on the implementation of the NPT Safeguards Agreement[1] and relevant provisions of Security Council resolutions in the Islamic Republic of Iran (Iran).

2. The Security Council has affirmed that the steps required by the Board of Governors in its resolutions[2] are binding on Iran.[3] The relevant provisions of the aforementioned Security Council resolutions[4] were adopted under Chapter VII of the United Nations Charter, and are mandatory, in accordance with the terms of those resolutions.[5]

3. In line with the request of the Board of Governors in resolution GOV/2012/50 (13 September 2012),[6] this document provides a comprehensive report on substantive implementation of that resolution and of resolution GOV/2011/69 (18 November 2011), especially with respect to the possible military dimensions of Iran's nuclear programme. It also addresses developments since the Director General's previous

* Circulated to the Board of Governors of the International Atomic Energy Agency under the symbol GOV/2012/55.

[1] The Agreement between Iran and the Agency for the Application of Safeguards in Connection with the Treaty on the Non Proliferation of Nuclear Weapons (INFCIRC/214), which entered into force on 15 May 1974.

[2] The Board of Governors has adopted 12 resolutions in connection with the implementation of safeguards in Iran: GOV/2003/69 (12 September 2003); GOV/2003/81 (26 November 2003); GOV/2004/21 (13 March 2004); GOV/2004/49 (18 June 2004); GOV/2004/79 (18 September 2004); GOV/2004/90 (29 November 2004); GOV/2005/64 (11 August 2005); GOV/2005/77 (24 September 2005); GOV/2006/14 (4 February 2006); GOV/2009/82 (27 November 2009); GOV/2011/69 (18 November 2011); and GOV/2012/50 (13 September 2012).

[3] In resolution 1929 (2010), the Security Council: affirmed, inter alia, that Iran shall, without further delay, take the steps required by the Board in GOV/2006/14 and GOV/2009/82; reaffirmed Iran's obligation to cooperate fully with the IAEA on all outstanding issues, particularly those which give rise to concerns about the possible military dimensions of the Iranian nuclear programme; decided that Iran shall, without delay, comply fully and without qualification with its Safeguards Agreement, including through the application of modified Code 3.1 of the Subsidiary Arrangements; and called upon Iran to act strictly in accordance with the provisions of its Additional Protocol and to ratify it promptly (paras. 1-6).

[4] The United Nations Security Council has adopted the following resolutions on Iran: 1696 (2006); 1737 (2006); 1747 (2007); 1803 (2008); 1835 (2008); and 1929 (2010).

[5] By virtue of its Relationship Agreement with the United Nations (INFCIRC/11, Part I.A), the Agency is required to cooperate with the Security Council in the exercise of the Council's responsibility for the maintenance or restoration of international peace and security. All Member States of the United Nations agree to accept and carry out the decisions of the Security Council, and in this respect, to take actions which are consistent with their obligations under the United Nations Charter.

[6] GOV/2012/50, para. 6.

report (GOV/2012/37, 30 August 2012), as well as issues of longer standing. It focuses on those areas where Iran has not fully implemented its binding obligations, as the full implementation of these obligations is needed to establish international confidence in the exclusively peaceful nature of Iran's nuclear programme.

B. Clarification of Unresolved Issues

4. As previously reported, in resolution GOV/2011/69, the Board, inter alia, stressed that it was essential for Iran and the Agency to intensify their dialogue aimed at the urgent resolution of all outstanding substantive issues for the purpose of providing clarifications regarding those issues, including access to all relevant information, documentation, sites, material and personnel in Iran. In that resolution, the Board also called on Iran to engage seriously and without preconditions in talks aimed at restoring international confidence in the exclusively peaceful nature of Iran's nuclear programme. In light of this, from January 2012 onwards, Agency and Iranian officials held several rounds of talks in Vienna and Tehran, including during a visit by the Director General to Tehran in May 2012. However, no concrete results were achieved.[7] In particular, there was no agreement on a structured approach to resolving outstanding issues related to possible military dimensions to Iran's nuclear programme and no agreement by Iran to the Agency's request for access to the Parchin site.

5. In resolution GOV/2012/50, the Board, inter alia, stressed that it was essential for Iran to immediately conclude and implement a structured approach, including, as a first step, providing the Agency with the access it had requested to relevant sites.[8] In that resolution, the Board also decided that Iranian cooperation with Agency requests aimed at the resolution of all outstanding issues was essential and urgent in order to restore international confidence in the exclusively peaceful nature of Iran's nuclear programme.[9]

6. In light of resolution GOV/2012/50, and immediately following the September 2012 Board meeting, the Agency took steps to engage Iran in further talks, including at a meeting on 17 September 2012 between the Director General and H.E. Mr. Fereydoun Abbasi, Vice President of Iran and Head of the Atomic Energy Organization of Iran. On 24 October 2012, the Agency wrote to Iran reaffirming the Agency's commitment to dialogue, and suggesting that a senior level meeting be held on 13 and 14 November 2012 aimed at finalising the structured approach document, agreement on which would allow the Agency and Iran to start substantive work on the outstanding issues. In a letter dated 1 November 2012, Iran reaffirmed its commitment to dialogue with the Agency and invited an Agency delegation to Tehran in mid-December 2012 in order to "discuss the modality for the resolution of the allegations, based on principles elaborated in the meeting between H.E. Dr. Jalili, the Secretary of Supreme National Security Council and the Director General on 30 May 2012". It was subsequently agreed that the Agency and Iran would meet in Tehran on 13 December 2012.

[7] GOV/2012/37, para. 8.
[8] GOV/2012/50, para. 4.
[9] GOV/2012/50, para. 4.

C. Facilities Declared under Iran's Safeguards Agreement

7. Under its Safeguards Agreement, Iran has declared to the Agency 16 nuclear facilities and nine locations outside facilities where nuclear material is customarily used (LOFs).[10] Notwithstanding that certain of the activities being undertaken by Iran at some of the facilities are contrary to the relevant resolutions of the Board of Governors and the Security Council, as indicated below, the Agency continues to verify the non-diversion of declared material at these facilities and LOFs.

D. Enrichment Related Activities

8. Contrary to the relevant resolutions of the Board of Governors and the Security Council, Iran has not suspended its enrichment related activities in the declared facilities referred to below. All of these activities are under Agency safeguards, and all of the nuclear material, installed cascades and the feed and withdrawal stations at those facilities are subject to Agency containment and surveillance.[11]

9. Iran has stated that the purpose of enriching UF_6 up to 5% U-235 is the production of fuel for its nuclear facilities[12] and that the purpose of enriching UF_6 up to 20% U-235 is the manufacture of fuel for research reactors.[13]

10. Since Iran began enriching uranium at its declared facilities, it has produced at those facilities approximately:

- 7,611 kg (+735 kg since the Director General's previous report) of UF_6 enriched up to 5% U-235, of which: 5,303 kg is presently in storage; 1,226 kg has been fed into the Pilot Fuel Enrichment Plant (PFEP) and 1,029 kg has been fed into the Fordow Fuel Enrichment Plant (FFEP) for enrichment up to 20% U-235; and 53 kg has been fed into the Uranium Conversion Facility (UCF) for conversion to UO_2;[14] and
- 232.8 kg (+43.4 kg since the Director General's previous report) of UF_6 enriched up to 20% U-235, of which: 134.9 kg is presently in storage; 1.6 kg has been downblended; and 96.3 kg has been fed into the Fuel Plate Fabrication Plant (FPFP) for conversion to U_3O_8.[15]

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[10] All of the LOFs are situated within hospitals.

[11] In line with normal safeguards practice, small amounts of nuclear material (e.g. some waste and samples) may not be subject to containment and surveillance.

[12] As declared in Iran's Design Information Questionnaires (DIQs) for the Fuel Enrichment Plant (FEP) at Natanz.

[13] GOV/2010/10, para. 8; H.E. Mr. Fereydoun Abbasi reportedly made a statement to the effect that Iran plans to build four to five new reactors in the next few years in order to produce radioisotopes and carry out research ("Iran will not stop producing 20% enriched uranium", *Tehran Times*, 12 April 2011). He was also quoted by the Iranian Student's News Agency as saying "To provide fuel for these (new) reactors, we need to continue with the 20 per cent enrichment of uranium" ("Iran to build new nuclear research reactors — report", Reuters, 11 April 2011).

[14] The figures referring to the UF_6 fed into the enrichment and/or conversion processes include UF_6 contained in the cylinders attached to the processes, as well as nuclear material held up in the process and present in waste.

[15] See footnote 14.

D.1. Natanz

11. **Fuel Enrichment Plant:** FEP is a centrifuge enrichment plant for the production of low enriched uranium (LEU) enriched up to 5% U-235, which was first brought into operation in 2007. The plant is divided into Production Hall A and Production Hall B. According to design information submitted by Iran, eight units are planned for Production Hall A, with 18 cascades in each unit and a total of about 25,000 centrifuges. Iran has yet to provide the corresponding design information for Production Hall B.

12. As of 10 November 2012, Iran had fully installed 61 cascades in Production Hall A, 54 of which were declared by Iran as being fed with natural UF_6. Iran had also partially installed one other cascade. Preparatory installation work had been completed for another 28 cascades, and was ongoing in relation to 54 others. All of the centrifuges installed in Production Hall A are IR-1 machines.[16]

13. Between 20 October 2012 and 11 November 2012, the Agency conducted a physical inventory verification (PIV) at FEP and verified that, as of 21 October 2012, 85,644 kg of natural UF_6 had been fed into the cascades since production began in February 2007, and a total of 7,451 kg of UF_6 enriched up to 5% U-235 had been produced. Iran has estimated that, between 22 October 2012 and 9 November 2012, a total of 1,576 kg of natural UF_6 was fed into the cascades and a total of approximately 160 kg of UF_6 enriched up to 5% U-235 was produced, which would result in a total production of 7,611 kg of UF_6 enriched up to 5% U-235 since production began.

14. Based on the results of the analysis of environmental samples taken at FEP since February 2007,[17] and other verification activities, the Agency has concluded that the facility has operated as declared by Iran in the relevant design information questionnaire (DIQ).

15. **Pilot Fuel Enrichment Plant:** PFEP is a research and development (R&D) facility, and a pilot LEU production facility, which was first brought into operation in October 2003. It has a cascade hall that can accommodate six cascades, and is divided between an area designated for the production of LEU enriched up to 20% U-235 (Cascades 1 and 6) and an area designated for R&D (Cascades 2, 3, 4 and 5).

16. As a result of the PIV carried out by the Agency at PFEP between 15 September 2012 and 1 October 2012, the Agency verified, within measurement uncertainties normally associated with such a facility, the inventory as declared by Iran on 15 September 2012.

17. ***Production area:*** As of 6 November 2012, Iran was feeding low enriched UF_6 into two interconnected cascades (Cascades 1 and 6) containing a total of 328 IR-1 centrifuges.

18. The Agency has verified that, as of 15 September 2012, 1,119.6 kg of UF_6 enriched up to 5% U-235 produced at FEP had been fed into the cascades in the production area since production began in February 2010, and that a total of 129.1 kg of UF_6 enriched up to 20% U-235 had been produced. Iran has estimated

[16] As of 10 November 2012, 10 414 centrifuges were installed at FEP (+991 since the Director General's previous report).

[17] Results are available to the Agency for samples taken up to 24 June 2012.

that, between 16 September 2012 and 11 November 2012, a total of 57.4 kg of UF_6 enriched up to 5% U-235 produced at FEP was fed into the cascades in the production area and that approximately 8.2 kg of UF_6 enriched up to 20% U-235 were produced. This would result in a total production of 137.3 kg of UF_6 enriched up to 20% U-235 at PFEP since production began.

19. ***R&D area:*** Since the Director General's previous report, Iran has been intermittently feeding natural UF_6 into IR-2m and IR-4 centrifuges, sometimes into single machines and sometimes into small or larger cascades.[18] Iran has yet to install three new types of centrifuge (IR-5, IR-6 and IR-6s) as it had indicated it intends to do.[19,20]

20. Between 22 August 2012 and 11 November 2012, a total of approximately 198.6 kg of natural UF_6 was fed into centrifuges in the R&D area, but no LEU was withdrawn as the product and the tails were recombined at the end of the process.

21. Based on the results of the analysis of the environmental samples taken at PFEP,[21] and other verification activities, the Agency has concluded that the facility has operated as declared by Iran in the relevant DIQ.

D.2. Fordow

22. **Fordow Fuel Enrichment Plant:** FFEP is, according to the DIQ of 18 January 2012,[22] a centrifuge enrichment plant for the production of UF_6 enriched up to 20% U-235 and the production of UF_6 enriched up to 5% U-235. Additional information from Iran is still needed in connection with this facility, particularly in light of the difference between the original stated purpose of the facility and the purpose for which it is now being used.[23] The facility, which was first brought into operation in 2011, contains 16 cascades, equally divided between Unit 1 and Unit 2, with a total of 2,784 centrifuges. To date, all of the centrifuges installed are IR-1 machines. Iran has yet to inform the Agency which of the cascades are to be used for enrichment up to 5% U-235 and/or for enrichment up to 20% U-235.[24]

23. Since the Director General's previous report, Iran has installed 644 centrifuges at FFEP, thereby completing the installation of centrifuges in all eight cascades in Unit 1, none of which it was feeding with UF_6. Iran had installed all eight cascades in Unit 2, four of which (configured in two sets of two interconnected cascades) it

[18] On 6 November 2012, there were 32 IR-4 centrifuges installed in Cascade 2, 14 IR-2m centrifuges installed in Cascade 3, 144 IR-4 centrifuges installed in Cascade 4, and 162 IR-2m centrifuges installed in Cascade 5.

[19] GOV/2012/9, para. 20.

[20] On 6 November 2012, the Agency observed the presence of two empty casings for IR-6 centrifuges at PFEP. According to Iran, when originally received at PFEP, these centrifuges had been complete, but the rotors had subsequently been removed for testing somewhere other than PFEP.

[21] Results are available to the Agency for samples taken up to 10 June 2012.

[22] To date, Iran has provided the Agency with an initial DIQ and three revised DIQs (GOV/2012/9, para. 24).

[23] GOV/2009/74, paras. 7 and 14.

[24] In a letter to the Agency dated 23 May 2012, Iran stated that the Agency would be notified about the production level of the cascades prior to their operation (GOV/2012/23, para. 25).

was feeding with UF_6 enriched up to 5% U-235[25] and four of which, having been subjected to vacuum testing, were ready for feeding with UF_6.

24. Iran has estimated that, between 14 December 2011, when feeding of the first set of two interconnected cascades began, and 10 November 2012, a total of 693 kg of UF_6 enriched up to 5% U-235 was fed into cascades at FFEP, and that approximately 95.5 kg of UF_6 enriched up to 20% U-235 were produced, 73.7 kg of which has been withdrawn from the process and verified by the Agency.

25. Based on the results of the analysis of environmental samples taken at FFEP,[26,27] and other verification activities, the Agency has concluded that the facility has operated as declared by Iran in its most recent relevant DIQ.

D.3. Other Enrichment Related Activities

26. The Agency is still awaiting a substantive response from Iran to Agency requests for further information in relation to announcements made by Iran concerning the construction of ten new uranium enrichment facilities, the sites for five of which, according to Iran, have been decided.[28] Iran has not provided information, as requested by the Agency, in connection with its announcement on 7 February 2010 that it possessed laser enrichment technology.[29] As a result of Iran's lack of cooperation on those issues, the Agency is unable to verify and report fully on these matters.

E. Reprocessing Activities

27. Pursuant to the relevant resolutions of the Board of Governors and the Security Council, Iran is obliged to suspend its reprocessing activities, including R&D.[30] Iran has stated that it "does not have reprocessing activities".[31] The Agency has continued to monitor the use of hot cells at the Tehran Research Reactor (TRR)[32] and the Molybdenum, Iodine and Xenon Radioisotope Production (MIX) Facility.[33] The Agency carried out an inspection and design information verification (DIV) at TRR on 11 November 2012, and a DIV at the MIX Facility on 12 November 2012. It is only with respect to TRR, the MIX Facility and the other facilities to which the Agency has access that the Agency can confirm that there are no ongoing reprocessing related activities in Iran.

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[25] The number of centrifuges being fed (696) remains unchanged from that reflected in the Director General's previous report (GOV/2012/37, Figure 7).

[26] Results are available to the Agency for samples taken up to 11 June 2012.

[27] GOV/2012/37, para. 26.

[28] "Iran Specifies Location for 10 New Enrichment Sites", Fars News Agency, 16 August 2010.

[29] Cited on the website of the Presidency of the Islamic Republic of Iran, 7 February 2010, at http://www.president.ir/en/?ArtID=20255.

[30] S/RES/1696 (2006), para. 2; S/RES/1737 (2006), para. 2; S/RES/1747 (2007), para. 1; S/RES/1803 (2008), para. 1; S/RES/1835 (2008), para. 4; S/RES/1929 (2010), para. 2.

[31] Letter to the Agency dated 15 February 2008.

[32] TRR is a 5 MW reactor which operates with 20% U-235 enriched fuel and is used for the irradiation of different types of targets and for research and training purposes.

[33] The MIX Facility is a hot cell complex for the separation of radiopharmaceutical isotopes from targets, including uranium, irradiated at TRR. The MIX Facility is not currently processing any uranium targets.

F. Heavy Water Related Projects

28. Contrary to the relevant resolutions of the Board of Governors and the Security Council, Iran has not suspended work on all heavy water related projects, including the ongoing construction of the heavy water moderated research reactor at Arak, the Iran Nuclear Research Reactor (IR-40 Reactor), which is under Agency safeguards.[34]

29. On 10 November 2012, the Agency carried out a DIV at the IR-40 Reactor at Arak and observed that the installation of cooling and moderator circuit piping was continuing. During the DIV, Iran stated that the operation of the IR-40 Reactor was now expected to commence in the first quarter of 2014.[35]

30. Since its visit to the Heavy Water Production Plant (HWPP) on 17 August 2011, the Agency has not been provided with further access to the plant. As a result, the Agency is again relying on satellite imagery to monitor the status of HWPP. Based on recent images, the plant appears to continue to be in operation. To date, Iran has not permitted the Agency to take samples from the heavy water stored at UCF.[36]

G. Uranium Conversion and Fuel Fabrication

31. Although Iran is obliged to suspend all enrichment related activities and heavy water related projects, it is conducting a number of activities at UCF, the Fuel Manufacturing Plant (FMP) and FPFP at Esfahan, as indicated below, which are in contravention of those obligations, notwithstanding that the facilities are under Agency safeguards. Iran has stated that it is conducting these activities in order to make fuel for research reactors.[37]

32. According to the latest information available to the Agency:

- Iran has produced at UCF: 550 tonnes of natural UF_6, 99 tonnes of which has been sent to FEP; and
- Iran has transferred to TRR the following fuel items produced at FMP and FPFP: ten containing uranium enriched up to 20% U-235, four containing uranium enriched to 3.34% U-235 and five containing natural uranium.

33. **Uranium Conversion Facility:** As previously reported, the Agency carried out a PIV at UCF in March 2012. In order to finalise its evaluation of the PIV results, the Agency has requested that Iran provide further information.

34. In the DIQ for UCF dated 13 October 2012, Iran informed the Agency of an increase in its capacity to produce natural UO_2 at UCF from 10 tonnes per year to 14 tonnes per year.

35. The Agency has verified that, as of 5 November 2012, Iran had produced 24 kg of uranium in the form of UO_2 during R&D activities involving the conversion of UF_6 enriched up to 3.34% U-235. Iran subsequently transferred 13.6 kg of uranium

[34] S/RES/1737 (2006), para. 2; S/RES/1747 (2007), para. 1; S/RES/1803 (2008), para. 1; S/RES/1835 (2008), para. 4; S/RES/1929 (2010), para. 2.
[35] GOV/2012/23, para. 32.
[36] GOV/2010/10, paras. 20 and 21.
[37] As declared in Iran's DIQs for FPFP.

in the form of UO_2 to FMP.[38] As of 6 November 2012, Iran had resumed these R&D activities, but had not produced additional uranium in the form of UO_2 from the conversion of UF_6 enriched to 3.34% U-235. As of the same date, Iran, through the conversion of uranium ore concentrate, had produced about 6,231 kg of natural uranium in the form of UO_2, of which the Agency has verified that Iran transferred 3,100 kg to FMP.

36. During a DIV carried out at UCF on 6 November 2012, Iran informed the Agency that, due to the rupture of a storage tank, a large quantity of liquid containing natural uranium scrap material had spilled onto the floor of the facility. Agency inspectors confirmed that the spillage had taken place. The Agency is discussing with Iran the accountancy of the nuclear material that has spilled from the tank.

37. **Fuel Manufacturing Plant:** Between 4 and 6 September 2012, the Agency carried out a PIV at FMP, the results of which it is still evaluating. On 7 November 2012, the Agency carried out a DIV and an inspection at FMP and confirmed that the manufacture of pellets for the IR-40 Reactor using natural UO_2 was ongoing. Iran informed the Agency that it had completed the manufacture of dummy fuel assemblies for the IR-40 Reactor.[39] As of 7 November 2012, Iran had not commenced the manufacture of fuel assemblies containing nuclear material. On the same date, the Agency also verified two prototype fuel rods made of UO_2 enriched to 3.34% U-235 prior to their transfer to TRR.

38. **Fuel Plate Fabrication Plant:** The Agency carried out a PIV at FPFP on 29 September 2012 and verified that, between the start of conversion activities on 17 December 2011 and 26 September 2012, 82.7 kg of UF_6 enriched up to 20% U-235 had been fed into the conversion process and 38 kg of uranium had been produced in the form of U_3O_8 powder[40] and fuel items. Iran has declared that, between 27 September 2012 and 10 November 2012, it did not convert any more of the UF_6 enriched up to 20% U-235 contained in the cylinder attached to the process. On 11 November 2012, the Agency verified a new fuel assembly prior to its transfer to TRR and verified the presence of 46 fuel plates. On 12 November 2012, the Agency and Iran agreed to an updated safeguards approach for FPFP.

H. Possible Military Dimensions

39. Previous reports by the Director General have identified outstanding issues related to possible military dimensions to Iran's nuclear programme and actions required of Iran to resolve these.[41] Since 2002, the Agency has become increasingly concerned about the possible existence in Iran of undisclosed nuclear related activities involving military related organizations, including activities related to the development of a nuclear payload for a missile.

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[38] GOV/2012/23, para. 35.

[39] A dummy assembly is similar to a fuel assembly except that it contains non-nuclear material.

[40] A small quantity of U_3O_8 enriched to 20% U-235 was converted into UO_2 and downblended with natural UO_2 to produce standard pellets at three different levels of enrichment (1.6%, 2.6% and 3.9%).

[41] See, for example: GOV/2011/65, paras. 38-45 and Annex; GOV/2011/29, para. 35; GOV/2011/7, Attachment; GOV/2010/10, paras. 40-45; GOV/2009/55, paras. 18-25; GOV/2008/38, paras. 14-21; GOV/2008/15, paras. 14-25 and Annex; GOV/2008/4, paras. 35-42.

40. The Annex to the Director General's November 2011 report (GOV/2011/65) provided a detailed analysis of the information available to the Agency, indicating that Iran has carried out activities that are relevant to the development of a nuclear explosive device. This information, which comes from a wide variety of independent sources, including from a number of Member States, from the Agency's own efforts and from information provided by Iran itself, is assessed by the Agency to be, overall, credible. The information indicates that, prior to the end of 2003 the activities took place under a structured programme; that some continued after 2003; and that some may still be ongoing. Since November 2011, the Agency has obtained more information which further corroborates the analysis contained in the aforementioned Annex.

41. In resolution 1929 (2010), the Security Council reaffirmed Iran's obligations to take the steps required by the Board of Governors in its resolutions GOV/2006/14 and GOV/2009/82, and to cooperate fully with the Agency on all outstanding issues, particularly those which give rise to concerns about the possible military dimensions to Iran's nuclear programme, including by providing access without delay to all sites, equipment, persons and documents requested by the Agency.[42] In its resolution GOV/2011/69, the Board of Governors, inter alia, expressed its deep and increasing concern about the unresolved issues regarding the Iranian nuclear programme, including those which need to be clarified to exclude the existence of possible military dimensions. As indicated above, in its resolution GOV/2012/50, the Board of Governors decided, inter alia, that Iranian cooperation with Agency requests aimed at the resolution of all outstanding issues was essential and urgent to restore international confidence in the exclusively peaceful nature of Iran's nuclear programme.

42. As indicated in Section B above, since the November 2011 Board, the Agency, through several rounds of formal talks and numerous informal contacts with Iran, has made intensive efforts to seek to resolve all of the outstanding issues related to Iran's nuclear programme, especially with respect to possible military dimensions, but without concrete results. Specifically, the Agency has:

- Sought agreement with Iran on a structured approach to the clarification of all outstanding issues (referred to in paragraph 4 above), focusing on the issues outlined in the Annex to GOV/2011/65. Agreement has yet to be reached;
- Requested that Iran provide the Agency with an initial declaration in connection with the issues identified in Section C of the Annex to GOV/2011/65. Iran's subsequent declaration dismissed the Agency's concerns in relation to these issues, largely on the grounds that Iran considered them to be based on unfounded allegations;
- Identified, as part of the structured approach, thirteen topics, consistent with those identified in the Annex to GOV/2011/65, which need to be addressed;
- Provided Iran with clarification of the nature of the Agency's concerns, and the information available to it, about Parchin and the foreign expert,[43] and presented Iran with initial questions in this regard, to which Iran has not responded; and

[42] S/RES/1929, paras. 2 and 3.

[43] GOV/2011/65, Annex, para. 44.

- Requested on several occasions, from January 2012 onwards, access to the Parchin site. Contrary to Board resolution GOV/2012/50, Iran has still not provided the Agency with access to the site.

43. **Parchin:** As stated in the Annex to the Director General's November 2011 report,[44] information provided to the Agency by Member States indicates that Iran constructed a large explosives containment vessel in which to conduct hydrodynamic experiments;[45] such experiments would be strong indicators of possible nuclear weapon development. The information also indicates that the containment vessel was installed at the Parchin site in 2000. As previously reported, the location at the Parchin site of the vessel was only identified in March 2011, and the Agency notified Iran of that location in January 2012. Iran has stated that "the allegation of nuclear activities in Parchin site is baseless".[46]

44. As previously reported, satellite imagery available to the Agency for the period from February 2005 to January 2012 shows virtually no activity at or near the building housing the containment vessel. Since the Agency's first request for access to this location, however, satellite imagery shows that extensive activities and resultant changes have taken place at this location. Among the most significant developments observed by the Agency at this location since February 2012 are:

- Frequent presence of, and activities involving, equipment, trucks and personnel;
- Run off of large amounts of liquid from the containment building over a prolonged period;
- Removal of external pipework from the containment vessel building;
- Razing and removal of five other buildings or structures and the site perimeter fence;
- Reconfiguration of electrical and water supply infrastructure;
- Shrouding of the containment vessel building and another building; and
- Initial scraping and removal of considerable quantities of earth at the location and its surrounding area, covering over 25 hectares, followed by further removal of earth to a greater depth at the location and the depositing of new earth in its place.

45. In light of the extensive activities that have been, and continue to be, undertaken by Iran at the aforementioned location on the Parchin site, when the Agency gains access to the location, its ability to conduct effective verification will have been seriously undermined. While the Agency continues to assess that it is necessary to have access to this location without further delay, it is essential that Iran also provide without further delay substantive answers to the Agency's detailed questions regarding the Parchin site and the foreign expert, as requested by the Agency in February 2012.[47]

[44] GOV/2011/65, Annex, para. 49.
[45] GOV/2011/65, Annex, para. 47.
[46] GOV/2012/37, para. 43.
[47] GOV/2012/9, para. 8.

I. Design Information

46. Contrary to its Safeguards Agreement and relevant resolutions of the Board of Governors and the Security Council, Iran is not implementing the provisions of the modified Code 3.1 of the Subsidiary Arrangements General Part to Iran's Safeguards Agreement,[48] which provides for the submission to the Agency of design information for new facilities as soon as the decision to construct, or to authorize construction of, a new facility has been taken, whichever is the earlier. The modified Code 3.1 also provides for the submission of fuller design information as the design is developed early in the project definition, preliminary design, construction and commissioning phases. Iran remains the only State with significant nuclear activities in which the Agency is implementing a comprehensive safeguards agreement that is not implementing the provisions of the modified Code 3.1. It is important to note that the absence of such early information reduces the time available for the Agency to plan the necessary safeguards arrangements, especially for new facilities, and reduces the level of confidence in the absence of other nuclear facilities.[49]

47. Contrary to Iran's obligations under the modified Code 3.1, Iran has not provided the Agency with an updated DIQ for the IR-40 Reactor since 2006. The lack of up-to-date information is having an adverse impact on the Agency's ability to effectively verify the design of the facility and to implement an effective safeguards approach.[50]

48. Iran's response to Agency requests that Iran confirm or provide further information regarding its stated intention to construct new nuclear facilities is that it would provide the Agency with the required information in "due time" rather than as required by the modified Code 3.1 of the Subsidiary Arrangements General Part to its Safeguards Agreement.[51]

J. Additional Protocol

49. Contrary to the relevant resolutions of the Board of Governors and the Security Council, Iran is not implementing its Additional Protocol. The Agency will not be in a position to provide credible assurance about the absence of undeclared nuclear material and activities in Iran unless and until Iran provides the necessary cooperation with the Agency, including by implementing its Additional Protocol.[52]

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[48] In accordance with Article 39 of Iran's Safeguards Agreement, agreed Subsidiary Arrangements cannot be changed unilaterally; nor is there a mechanism in the Safeguards Agreement for the suspension of provisions agreed to in the Subsidiary Arrangements. Therefore, as previously explained in the Director General's reports (see, for example, GOV/2007/22, 23 May 2007), the modified Code 3.1, as agreed to by Iran in 2003, remains in force. Iran is further bound by operative paragraph 5 of Security Council resolution 1929 (2010) to "comply fully and without qualification with its IAEA Safeguards Agreement, including through the application of modified Code 3.1".

[49] GOV/2010/10, para. 35.

[50] GOV/2012/37, para. 46.

[51] GOV/2011/29, para. 37; GOV/2012/23, para. 29.

[52] Iran's Additional Protocol was approved by the Board on 21 November 2003 and signed by Iran on 18 December 2003, although it has not been brought into force. Iran provisionally implemented its Additional Protocol between December 2003 and February 2006.

K. Other Matters

50. The Agency and Iran have continued to discuss the discrepancy between the amount of nuclear material declared by the operator and that measured by the Agency in connection with conversion experiments carried out by Iran at the Jabr Ibn Hayan Multipurpose Research Laboratory (JHL) between 1995 and 2002.[53]

51. As previously reported, Iran is now using in the core of TRR a number of fuel assemblies that were produced in Iran and which contain nuclear material that was enriched in Iran up to 3.5% and up to 20% U-235.[54]

52. As indicated in the Director General's previous report,[55] on 29 and 30 July 2012, the Agency conducted an inspection at the Bushehr Nuclear Power Plant (BNPP) while the reactor was operating at 75% of its nominal power. In a letter dated 15 October 2012, Iran informed the Agency that "fuel assemblies will be transferred from the core to spent fuel pond" from 22 to 29 October 2012. On 6 and 7 November 2012, the Agency conducted an inspection at BNPP and verified that the fuel assemblies were in the spent fuel pond.

L. Summary

53. While the Agency continues to verify the non-diversion of declared nuclear material at the nuclear facilities and LOFs declared by Iran under its Safeguards Agreement, as Iran is not providing the necessary cooperation, including by not implementing its Additional Protocol, the Agency is unable to provide credible assurance about the absence of undeclared nuclear material and activities in Iran, and therefore to conclude that all nuclear material in Iran is in peaceful activities.[56]

54. Contrary to the Board resolutions of November 2011 and September 2012, and despite the intensified dialogue between the Agency and Iran since January 2012, no concrete results have been achieved in resolving the outstanding issues, including Iran having not concluded and implemented the structured approach. The Director General is, therefore, unable to report any progress on clarifying the issues relating to possible military dimensions to Iran's nuclear programme.

55. It is a matter of concern that the extensive and significant activities which have taken place since February 2012 at the location within the Parchin site to which the Agency has requested access will have seriously undermined the Agency's ability to undertake effective verification. The Agency reiterates its request that Iran, without further delay, provide both access to that location and substantive answers to the Agency's detailed questions regarding the Parchin site and the foreign expert.

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[53] This material had been under Agency seal since 2003; GOV/2003/75, paras. 20-25 and Annex 1; GOV/2004/34, para. 32, and Annex, paras. 10-12; GOV/2004/60, para. 33, and Annex, paras. 1-7; GOV/2011/65, para. 49.

[54] GOV/2012/37, para. 50.

[55] GOV/2012/37, para. 51.

[56] The Board has confirmed on numerous occasions, since as early as 1992, that paragraph 2 of INFCIRC/153 (Corr.), which corresponds to Article 2 of Iran's Safeguards Agreement, authorizes and requires the Agency to seek to verify both the non diversion of nuclear material from declared activities (i.e. correctness) and the absence of undeclared nuclear activities in the State (i.e. completeness) (see, for example, GOV/OR.864, para. 49).

56. Given the nature and extent of credible information available, the Agency continues to consider it essential for Iran to engage with the Agency without further delay on the substance of the Agency's concerns. In the absence of such engagement, the Agency will not be able to resolve concerns about issues regarding the Iranian nuclear programme, including those which need to be clarified to exclude the existence of possible military dimensions to Iran's nuclear programme.

57. The Director General continues to urge Iran, as required in the binding resolutions of the Board of Governors and mandatory Security Council resolutions, to take steps towards the full implementation of its Safeguards Agreement and its other obligations, and to urge Iran to engage with the Agency to achieve concrete results on all outstanding substantive issues.

58. The Director General will continue to report as appropriate.